

Universal Kymographs



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Universal Kymograph with Integral Stimulator

Universal Kymograph Assembly

This Assembly includes the Universal Kymograph with Stimulator plus a comprehensive set of accessories with a 165 page Applications Manual with detailed instructions for over 30 experiments. Some of the possible experiments include:

Frog Heart In Situ Preparation:

- Recording of cardiac activity
- Effect of stimulation of the heart (refractory period compensatory pause)
- Demonstration of conduction path (stimulus ligatures)
- Effects of stimulating the vagus nerve (cardiac inhibition)
- Effect of drugs

Muscle-Nerve Preparation:

- Effect of stimulating voltage (simple muscle twitch)
- Effect of stimulation frequency (tetanus)
- Staircase phenomenon (Treppe)
- Effect of repeated stimulation (fatigue)
- Effects of drugs on muscles
- Effect of pre- and after-loading on muscle efficiency

For locust work, a special cork mounting block is supplied, which wedges vertically in the muscle chamber. The accessories for the Kymograph are listed on the following pages.

Catalog No.	\$	Product
BS4 50-7384		Universal Kymograph Assembly, 115 VAC, 60 Hz
BS4 50-7392		Universal Kymograph Assembly, 230 VAC, 50 Hz

Universal Kymograph with Stimulator

The Kymograph is the same as described above. The built-in square wave stimulator has a maximum output of 25 volts with less than 25 Ω impedance. The frequency range is continuously variable from 0 to 100 Hz. There are six preset pulse widths. The output has three selections: continuous, single pulse by push button, and external trigger via the contact arms on the Kymograph spindle. All the controls are located on the front panel.

Specifications

Kymograph	Same as Universal Kymograph
Stimulator Specifications:	
Output Voltage	0 to 25 V, continuously variable in 3 ranges, 0 to 250 mV, 0 to 2.5 V and 0 to 25 V
Sockets	2 x 4 mm sockets
Impedance	< 25 Ω at max. output current of 250 mA
Pulse Width	6 preset widths of 0.05, 0.1, 0.5, 1.2 and 5 ms
Frequency	0.1 to 100 Hz continuously variable in 3 ranges, 0.1 to 1.0 Hz, 1 to 10 Hz and 10 to 100 Hz
Mode Selection	Continuous, single and trigger via contact arms on spindle
Cylinders	Not included, see next page
Base Dimensions	460 x 230 x 220 mm (18.1 x 9 x 8.7 in), H x W x D
Weight	7.5 kg (16.5 lb)

Catalog No.	\$	Product
BS4 50-7368		Universal Kymograph with Stimulator, 115 VAC, 60 Hz
BS4 50-7376		Universal Kymograph with Stimulator, 230 VAC, 50 Hz

Universal Kymograph

- Two fully adjustable support arms each with a 9.5 mm OD upright rod for mounting accessories
- Adjustable, double contact arms are fitted to the spindle base for external trigger applications (e.g. stimulators)

The Universal Kymograph has a spindle 320 x 19 mm OD (12-1/2 x 3/4 in OD) for mounting a cylinder (not included). The speed range, dependent on circumference of cylinder chosen, is infinitely variable by use of two controls. A manually operated stop is provided to allow the spindle to revolve either continuously or for a single

revolution. The Kymograph is supplied without cylinder or stimulator.

Specifications

Speed Range	Infinitely variable from 0.006 to 625 mm/sec with 500 mm circumference cylinder; 0.012 to 1250 mm/sec with 1000 mm circumference cylinder, cylinder not supplied
Spindle Rotation	Either continuous or single revolution using manual start/stop control
Contact Arms	Two fully variable 'opto-triggering' producing a short circuit across 'contact' sockets
Writing Medium	Smoke or ink, dependent on recording cylinder chosen
Cylinders	Not included, see next page
Base Dimensions, H x W x D	460 x 230 x 220 mm (18.1 x 9 x 8.7 in)
Weight	7 kg (15.4 lb)

Catalog No.	\$	Product
BS4 50-7343		Universal Kymograph, 115 VAC, 60 Hz
BS4 50-7350		Kymograph, 230 VAC, 50 Hz